



Part of  Education Group

**Where does 3D Printing fit
into education?**

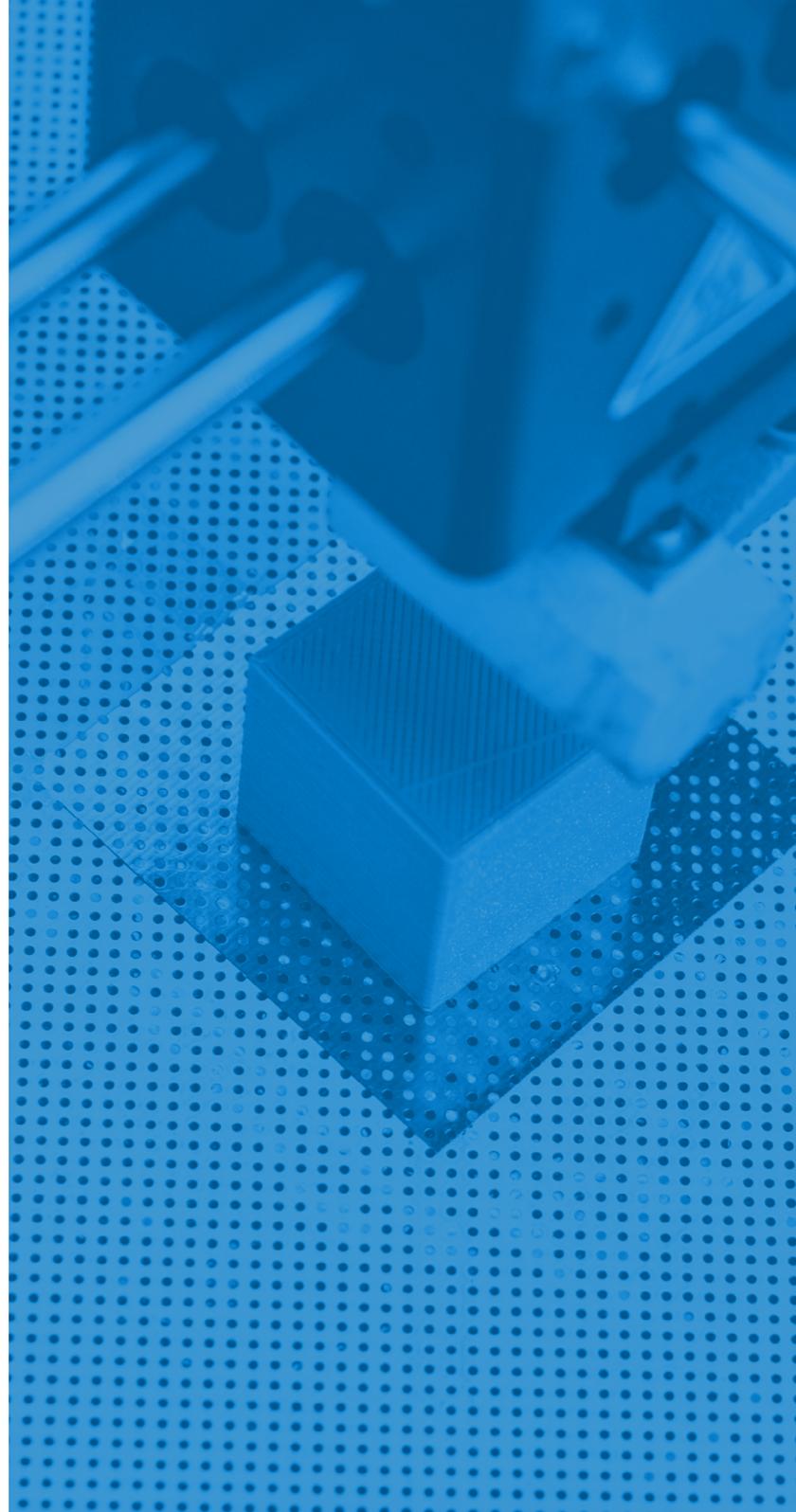
Here are just a few reasons why 3D Printing will benefit you and your students; arming you with an advancing technology that will help elevate teaching and the application of the D&T curriculum, and 21st-century teaching of the 4C's - Critical Thinking, Creativity, Collaboration and Communication.

Bringing designs to life through creativity

Our curriculum says students must “use creativity and imagination to design and make prototypes... that solve real & relevant problems”. 3D Printing enables them to take the practice of ‘thinking outside of the box’ to another level. Bringing their designs to life, whilst at the same time understanding the importance of product concept and evaluation, which will challenge and strengthen their creativity. It’s a perfect tool for igniting innovative thinking in your classroom.

Aids cross-curricular learning

3D Printing technology can be used across multiple subjects and is excellent for extra-curricular and cross-curricular activities such as STEM. It is perfect for addressing the opportunity to apply knowledge from other subjects in D&T, and also allow those subjects to use this technology within their lessons such as Art, Mathematics, History and Geography. Coupled with its links in STEM, Science would certainly benefit from a wide variety of projects across all three science disciplines, from the planets to fossils, and molecular modelling. This may also help with shared funding to assist in the purchase of a 3D Printer.



Critical thinking and problem solving

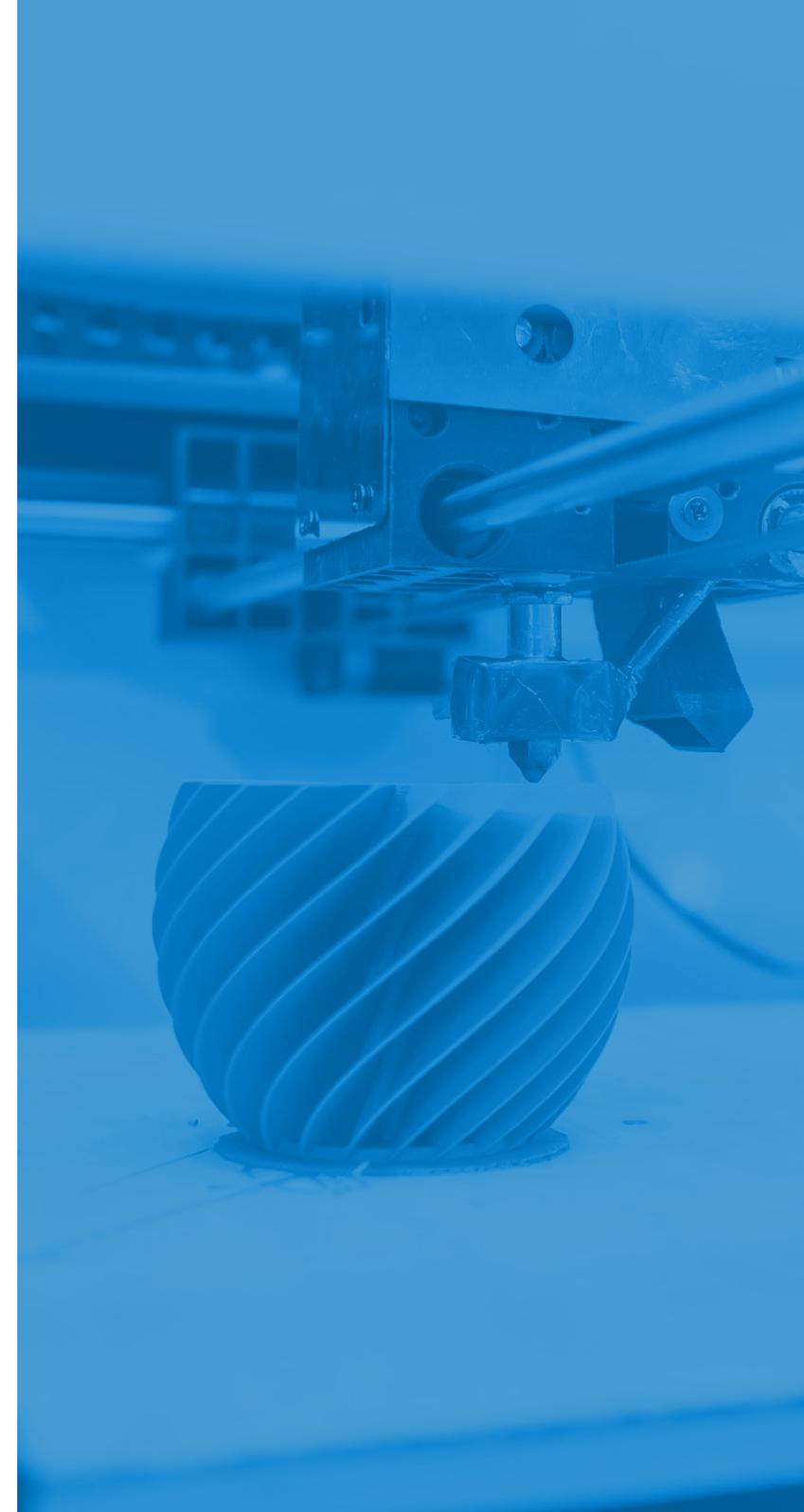
Identifying needs, problem-solving and creating 'open-ended' solutions are all core elements of the D&T curriculum. 3D Printing allows you to fully embrace the iterative learning process through experimentation and prototyping; enabling students to design solutions, test, evaluate, and adapt their design to strengthen their ideas.

Promotes knowledge retention

All children benefit from interactive, hands-on learning, enabling them to digest and retain information. However, the transformation from design to a tangible form will better engage not only visual learners but kinaesthetic learners too. Students that struggle with theory and textbook learning will benefit from the technology and its processes, unlocking hidden potential when turning theory into practice, and engaging students in hands-on activities in the fundamental application of designing and making principles within the curriculum.

Affordable equipment

3D Printers are an affordable way of integrating and demonstrating industrial formats, such as rapid processing and industrial processing in education. It is a great technology that will help students "develop manufacturing processes to design and make with confidence, prototypes in response to issues, needs, problems and opportunities"



Real-world context and application

3D Printing is perfect for empowering students to develop solutions to real-world contextual challenges set out in the D&T curriculum. Whether designing solutions to save our communities, addressing medical impairments, or creating products to support a sustainable future. It will equip students with a tool for the whole journey, from iterative design to the end product, with the flexibility of iteration and change - and no fixed design!

Promotes collaboration

3D Printing is an excellent tool for using design strategies such as collaborative learning, from peer-to-peer evaluation, to fully integrated collaborative STEM challenges. You will often find the power of collaboration is an excellent way to engage those less academic learners, plus strengthen communication skills to efficiently and effectively convey ideas.

Curricular links with maths and science

Our D&T curriculum includes the need to “apply relevant knowledge, skills, and understanding from key stage 3 and 4 courses in the sciences and mathematics.” 3D Printing will equip students with projects that will naturally enable them to use a wide range of the skills and knowledge outlined in the curriculum; from scaling drawings through to ratios and fractions to understanding the properties of materials.



PREPARING TOMORROW'S INVENTORS

Careers in additive manufacturing are increasing due to ever-evolving technological advances, and the popularity of this technology.

Getting to grips with 3D Printing in your class will give your students the skills they need for a career in additive manufacturing, and an understanding of where this process fits into engineering and manufacturing.

Just a few of the sectors embracing additive manufacturing today include Manufacturing, Automotive, Aviation, Aerospace, Architecture, Construction, Consumer Products, Medical, Dental, Food, and Fashion.

How do I get started?



Find a 3D Printer to suit your requirements

Finding the best 3D Printer that aligns with your classroom requirements can be a challenge, especially if you are new to the technology. Our buying guide will help you define your requirements and source the best printer for you: technologysupplies.co/3D-Printer-In-Ed-Guide



Gather insights and resources to begin teaching 3D Printing

There are lots of education-specific curricula and resources available to help you to quickly and easily implement 3D Printing into your lessons, straight 'out of the box'. Check out our guide above to find out more.



Equip yourself with skills to create a winning bid

If you are struggling with funding and winning bids for your equipment, we have an excellent guide to help you convince your leadership teams: technologysupplies.co/Capital-Bid-In-Ed-Guide



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